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## (54) CALCULUS CRUSHING DEVICE

## (57) Abstract

PURPOSE: To exactly irradiate a calculus part with an impulse wave by generating a low pressure ultrasonic wave by using a piezo-element group, and displaying a change of a peak value with time in the prescribed period of a reflected wave together with an image near the calculus part.

CONSTITUTION: A pulser 6 is connected to a piezo-element group 2 and cut off the reflected waves, which are received by the piezo-element group 2, from the inside of the body of a patient 4, only a signal near the focal point of the piezo-element group 2 is extracted by a reception circuit 12 according to a time gate signal from a sequence controller 8 and inputted to a peak detection circuit 13. Then, a reflected wave peak value in a signal period is detected and inputted to an imaging device 14. The imaging device 14 transmits the ultrasonic wave through an ultrasonic probe 3 for imaging to the inside of the body of the patient 4 and receives the reflected wave and an ultrasonic B mode image is displayed together with a graph showing the

change with the passage of time in the reflected peak value. Since a coincident state between a calculus 5 and the focal point can be known, a time, in which the reflected wave peak value is enough large, can be judged as timing to irradiate the calculus with the impulse wave.

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